Red Hat Enterprise Virtualization for Desktops 2.2
User Guide

A guide to accessing and using virtual desktops.
Edition 2

Dani Coulson David Jorm

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Dani Coulson
Red Hat Engineering Content Services

David Jorm
Red Hat Engineering Content Services

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Abstract

This document is a reference guide for users of a Red Hat Enterprise Virtualization for Desktops system.

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Preface

1. Document Conventions

This manual uses several conventions to highlight certain words and phrases and draw attention to specific pieces of information.

In PDF and paper editions, this manual uses typefaces drawn from the Liberation Fonts set. The Liberation Fonts set is also used in HTML editions if the set is installed on your system. If not, alternative but equivalent typefaces are displayed. Note: Red Hat Enterprise Linux 5 and later include the Liberation Fonts set by default.

1.1. Typographic Conventions

Four typographic conventions are used to call attention to specific words and phrases. These conventions, and the circumstances they apply to, are as follows.

`Mono-spaced Bold`

Used to highlight system input, including shell commands, file names and paths. Also used to highlight keys and key combinations. For example:

> To see the contents of the file **`my_next_bestselling_novel`** in your current working directory, enter the **`cat my_next_bestselling_novel`** command at the shell prompt and press **`Enter`** to execute the command.

The above includes a file name, a shell command and a key, all presented in mono-spaced bold and all distinguishable thanks to context.

Key combinations can be distinguished from an individual key by the plus sign that connects each part of a key combination. For example:

> Press **`Enter`** to execute the command.
>
> Press **`Ctrl`**+**`Alt`**+**`F2`** to switch to a virtual terminal.

The first example highlights a particular key to press. The second example highlights a key combination: a set of three keys pressed simultaneously.

If source code is discussed, class names, methods, functions, variable names and returned values mentioned within a paragraph will be presented as above, in **`mono-spaced bold`**. For example:

> File-related classes include **`filesystem`** for file systems, **`file`** for files, and **`dir`** for directories. Each class has its own associated set of permissions.

Proportional Bold

This denotes words or phrases encountered on a system, including application names; dialog box text; labeled buttons; check-box and radio button labels; menu titles and sub-menu titles. For example:

> Choose **System** → **Preferences** → **Mouse** from the main menu bar to launch **Mouse Preferences**. In the **`Buttons`** tab, select the **`Left-handed mouse`** check box and click **`Close`** to switch the primary mouse button from the left to the right (making the mouse suitable for use in the left hand).
>
> To insert a special character into a **`gedit`** file, choose **Applications** → **Accessories** →

> **Character Map** from the main menu bar. Next, choose **Search** → **Find...** from the **Character Map** menu bar, type the name of the character in the **Search** field and click **Next**. The character you sought will be highlighted in the **Character Table**. Double-click this highlighted character to place it in the **Text to copy** field and then click the **Copy** button. Now switch back to your document and choose **Edit** → **Paste** from the **gedit** menu bar.

The above text includes application names; system-wide menu names and items; application-specific menu names; and buttons and text found within a GUI interface, all presented in proportional bold and all distinguishable by context.

Mono-spaced Bold Italic or ***Proportional Bold Italic***

Whether mono-spaced bold or proportional bold, the addition of italics indicates replaceable or variable text. Italics denotes text you do not input literally or displayed text that changes depending on circumstance. For example:

> To connect to a remote machine using ssh, type **ssh *username*@*domain.name*** at a shell prompt. If the remote machine is **example.com** and your username on that machine is john, type **ssh john@example.com**.
>
> The **mount -o remount *file-system*** command remounts the named file system. For example, to remount the **/home** file system, the command is **mount -o remount /home**.
>
> To see the version of a currently installed package, use the **rpm -q *package*** command. It will return a result as follows: ***package-version-release***.

Note the words in bold italics above — username, domain.name, file-system, package, version and release. Each word is a placeholder, either for text you enter when issuing a command or for text displayed by the system.

Aside from standard usage for presenting the title of a work, italics denotes the first use of a new and important term. For example:

> Publican is a *DocBook* publishing system.

1.2. Pull-quote Conventions

Terminal output and source code listings are set off visually from the surrounding text.

Output sent to a terminal is set in **mono-spaced roman** and presented thus:

```
books        Desktop   documentation  drafts  mss    photos   stuff  svn
books_tests  Desktop1  downloads      images  notes  scripts  svgs
```

Source-code listings are also set in **mono-spaced roman** but add syntax highlighting as follows:

```
static int kvm_vm_ioctl_deassign_device(struct kvm *kvm,
                 struct kvm_assigned_pci_dev *assigned_dev)
{
         int r = 0;
         struct kvm_assigned_dev_kernel *match;

         mutex_lock(&kvm->lock);

         match = kvm_find_assigned_dev(&kvm->arch.assigned_dev_head,
                                       assigned_dev->assigned_dev_id);
         if (!match) {
                 printk(KERN_INFO "%s: device hasn't been assigned before, "
                   "so cannot be deassigned\n", __func__);
                 r = -EINVAL;
                 goto out;
         }

         kvm_deassign_device(kvm, match);

         kvm_free_assigned_device(kvm, match);

out:
         mutex_unlock(&kvm->lock);
         return r;
}
```

1.3. Notes and Warnings

Finally, we use three visual styles to draw attention to information that might otherwise be overlooked.

Note

Notes are tips, shortcuts or alternative approaches to the task at hand. Ignoring a note should have no negative consequences, but you might miss out on a trick that makes your life easier.

Important

Important boxes detail things that are easily missed: configuration changes that only apply to the current session, or services that need restarting before an update will apply. Ignoring a box labeled 'Important' will not cause data loss but may cause irritation and frustration.

Warning

Warnings should not be ignored. Ignoring warnings will most likely cause data loss.

2. We Need Feedback!

If you find a typographical error in this manual, or if you have thought of a way to make this manual better, we would love to hear from you! Please submit a report by email to the author of the manual, David Jorm (djorm@redhat.com). When submitting a bug report, be sure to mention the manual's

identifier: *User_Guide*.

If you have a suggestion for improving the documentation, try to be as specific as possible when describing it. If you have found an error, include the section number and some of the surrounding text so we can find it easily.

Chapter 1. Introduction

Desktop virtualization provides a desktop environment that is very similar to that experienced when using a standard personal computer. The main difference is that a virtual desktop physically resides on a remote server and is connected to using a 'thin client' computer.

This system provides a number of advantages:

- Faster provisioning of new desktops.
- The ability to access a desktop from any thin client with a suitable web browser.
- Access to multiple desktops from the one thin client.
- The ability to share desktops between users.
- Centralized desktop support with functionality to restore desktops to a previous state.
- Increased data security.

Virtual desktops are accessed through a web browser that connects to the user portal. The user portal is used to display and access all assigned desktops. Desktops are assigned by your system administrator.

To use a desktop, you must first turn it on before connecting to it. The following chapters provide instructions on how to perform these steps.

Chapter 2. Requirements

To connect to a virtual desktop, you will need access to a thin client with a supported web browser installed. The following web browsers are supported:

- Internet Explorer 7 or higher on Windows, with the SPICE ActiveX control installed.
- Mozilla Firefox 3 on Red Hat Enterprise Linux, with the SPICE plugin installed

64-bit editions of Internet Explorer are not supported by SPICE

The SPICE plugin for Internet Explorer is 32-bit only. 64-bit editions of Internet Explorer cannot be used to connect to virtual desktops using SPICE.

You will also require the following information:

- User portal web address.
- Access credentials:
  - **Username**
  - **Password**
  - **Domain** details

Contact your system administrator if you do not have all of these requirements.

Chapter 3. Getting Started

This chapter provides instructions for accessing and using the Red Hat Enterprise Virtualization user portal, which is used to access assigned desktops.

3.1. Logging in

1. Open the web browser and enter the provided user portal web address into the address bar.

   A message is displayed, informing you that you are being redirected to the User Portal Login Page. If the login page does not load, click **here**.

ENTERPRISE
VIRTUALIZATION
You should be redirected to the Red Hat Enterprise Virtualization User Portal Login Page in a few seconds.
If nothing happens, click here.

Figure 3.1. Login page

2. When the Red Hat Enterprise Virtualization login screen opens, enter your **User Name** and **Password** in the corresponding fields.

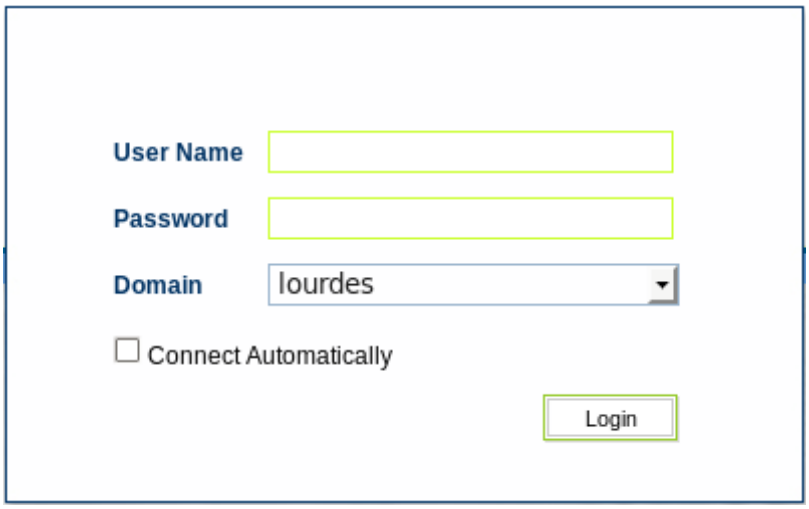

Figure 3.2. Log in

3. The **Domain** drop-down menu can be used to select the domain.

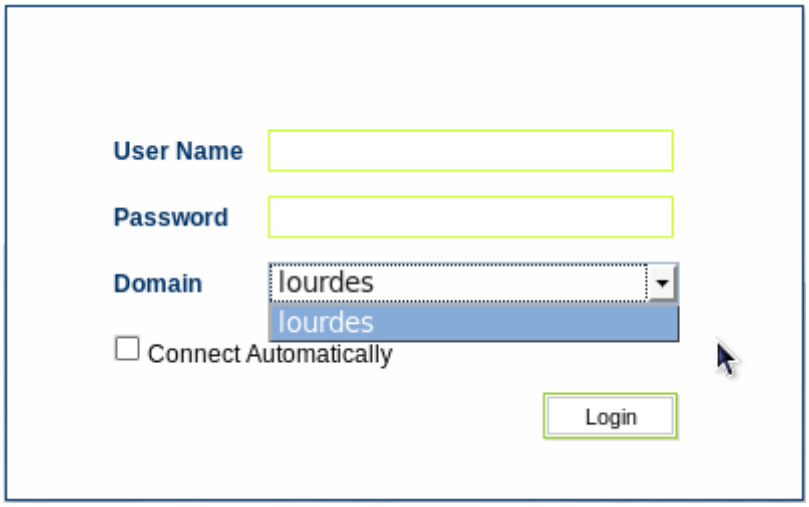

Figure 3.3. Log in Domain drop-down menu

4. If you have only one running desktop in use, it is possible to enable an automatic connection to the desktop. By selecting this option at log in time, the system will bypass the user portal and connect directly to the running desktop. This setting can be overridden by your system administrator.
   A. To enable automatic connection to the running desktop, select the **Connect Automatically** checkbox.
   B. If you have more than one running desktop or do not wish to automatically connect to your desktop, leave the **Connect Automatically** checkbox unselected.
5. Click **Login**.
   A. If the **Connect Automatically** checkbox has previously been selected, or the system administrator enabled this option for the desktop, the user portal will be bypassed and you will be connected directly to the desktop.
   B. If you did not select the **Connect Automatically** checkbox and this option was not enabled by the system administrator, you will directed to the user portal. To access a desktop, it must first be turned on before connecting to it. Instructions on how to access desktops is provided in Section 5.1, “Accessing a desktop”.
6. The user portal is displayed.

Figure 3.4. User Portal

3.2. Logging out

It is recommended that you log out of the user portal once you have finished using it.

Procedure 3.1. To log out of the user portal:

1. At the top left of the user portal, click **Sign out**.
2. You are logged out and returned to the user portal login screen.

3.3. ActiveX installation

To access and use Red Hat Enterprise Virtualization desktops from a Windows computer running Internet Explorer, you must first add the ActiveX component to your web browser. The ActiveX component is required to connect to desktops using the SPICE connection protocol. For further information, refer to Section 5.1.3, “Connecting to a desktop”.

The first time that a desktop client is used to connect to a desktop, the ActiveX component will automatically be installed. As updates become available, these will be automatically installed at log in.

On many Windows systems, attempting to install the ActiveX component causes the web browser to issue a security warning. You will need to confirm that you wish to proceed with the installation to continue.

For example, when attempting to install the ActiveX component in Windows XP with Service Pack 2, the add-on notification bar will appear within Internet Explorer. Click on the notification bar and accept the installation. When the security warning appears asking if you wish to run the ActiveX control, click **Run** to continue.

3.4. Mozilla Firefox plugin installation

To access and use Red Hat Enterprise Virtualization desktops from a Red Hat Enterprise Linux computer running Mozilla Firefox, you must first install the SPICE Firefox plugin. The SPICE plugin is required to connect to desktops using the SPICE connection protocol. For further information, refer to Section 5.1.3, “Connecting to a desktop”.

The Firefox plugin is provided by the package **spice-xpi** which is available on Red Hat Network in the **Red Hat Enterprise Linux** and **Red Hat Enterprise Linux Desktop** channels. To install the package, ensure your system is subscribed to the **Red Hat Enterprise Linux** or **Red Hat Enterprise Linux Desktop** channel and run the command:

```
yum install spice-xpi
```

The next time you start Mozilla Firefox the plugin will be installed.

Chapter 4. Understanding the User Portal

Once you are logged into the the user portal, desktop symbols will be displayed for each desktop assigned to you.

The desktop symbols provide the following functionality:

- Turn the desktop on or off.
- Connect or disconnect the desktop.
- Select a connection protocol. This option is only available if a protocol other than the default is available for use with the particular desktop.
- Configure the various protocol options for RDP or SPICE desktop connections.

4.1. Desktop symbol features

Figure 4.1, “Desktop Symbol Features” illustrates the desktop symbol features in the user portal.

The numbers in the diagram correspond to the desktop features listed in Table 4.1, “Description of Features”.

Figure 4.1. Desktop Symbol Features

Table 4.1. Description of Features

Number	Feature	Description
1	**Desktop Name**	The name of the desktop. This is set by the system administrator.
2	**On / Off Button**	This button allows you to turn a desktop on or off. It behaves in the same way as the on/off switch on a physical desktop. • When the button is green, this indicates that the desktop is on. Pressing this button while a desktop is on will cause it to turn off. • When the button is red, this indicates that the desktop is turned off. Pressing the button will turn the desktop on.
3	**Connect / Disconnect Button**	This button is used for connecting and disconnecting to a desktop that is currently running. You cannot connect to a desktop using SPICE while it is powering up. • Pressing this button connects a desktop, indicated by the button turning green. • Pressing this button disconnects a desktop, indicated by the button turning red.
4	**Status Window**	This window displays the current state of the desktop. Possible states are: • Powering up: the desktop is turning on. • Powering down: the desktop is turning off. • Running: the desktop is on and the operating system logo is displayed in the status window. • Not running: the desktop is off.

5	**Options**	Clicking on **Options** allows the desktop connection protocol to be selected. The connection protocol must be selected before connecting to the desktop. The options available depend on the desktop configuration. Available options are: - SPICE: Red Hat Enterprise Virtualization protocol with display acceleration - RDP: Microsoft Remote Desktop Protocol The **Options** dialog box also provides access to configuration of the connection **Protocol Options**. For further details, refer to Section 5.1.2, “Selecting a connection protocol”.

Chapter 5. Accessing Desktops

This chapter provides instructions for accessing virtual desktops.

A user can be associated with multiple desktops. Each desktop is able to run various operating systems, as configured by your system administrator. It is possible for one user to use multiple desktops simultaneously.

Automatic desktop connection

You will be automatically connected to a desktop if you have been assigned to only one desktop or if you have previously logged into the desktop and selected the **Connect Automatically** option. Once automatically logged in, you are able to begin using your desktop. Refer to Chapter 6, *Using Virtual Desktops* for more information.

Manual desktop connection

If you are not automatically connected to a desktop, the user portal will display the symbols of the desktops assigned to you.

A desktop symbol displayed in the user portal represents a Red Hat Enterprise Virtualization virtual desktop that is either a dedicated desktop or a pool desktop. A pool desktop is a desktop that is shared by more than one person and can be used to host applications accessed by many users.

A connection protocol enables you to see and interact with a desktop. When connecting to desktops, one of two types of connection protocols can be used:

- SPICE: Red Hat Enterprise Virtualization remote rendering protocol.
- Remote Desktop Protocol (RDP): Microsoft protocol for connecting to Windows desktops.

5.1. Accessing a desktop

A desktop displayed in the user portal is available for access by turning it on and then connecting to it. Refer to Section 5.1.1, “Turning a desktop on” and Section 5.1.3, “Connecting to a desktop”.

Although each desktop is configured to use a default connection protocol, it is possible to use alternative connection protocols. For further information, refer to Section 5.1.2, “Selecting a connection protocol”.

If a desktop is turned off, this is indicated by the desktop symbol displaying the following:

- **`Not Running`** is displayed in the status window;
- The **On/Off** button is red.

Figure 5.1. Desktop turned off

5.1.1. Turning a desktop on

A desktop must be turned on before connecting to it.

Procedure 5.1. To turn on a desktop:

1. From the desktop symbol, click **On/Off**.
2. The desktop powers up.

Figure 5.2. Desktop powering up

3. The **On/Off** button turns green.

Figure 5.3. Running desktop

4. Click on the **Connect/Disconnect** button to connect using the default protocol.

   Once the desktop has connected to the operating system, the **Connect/Disconnect** button turns green.

Figure 5.4. Connected desktop

Connect only when guest is running

The SPICE connection will only be established when the desktop is fully up and running. You will not be able to connect to the guest when it is powering up.

5.1.2. Selecting a connection protocol

Each desktop is connected using a single protocol. Although the default protocol is automatically used, some desktops provide the option of connecting with a protocol other than the default.

To select the connection protocol for a desktop:

1. From the desktop symbol, click **Options**.
2. The available protocols for the desktop are displayed, with the default connection protocol pre-selected.

Figure 5.5. Connection protocol options

3. Select the protocol that you wish to connect to the desktop with.

5.1.2.1. Configuring connection protocol options

Each desktop is connected using a single connection protocol, depending on the protocols available to the particular desktop. Both SPICE and RDP are defined with a default set of options that can be changed as required.

5.1.2.1.1. SPICE Options

A desktop that is connected with the SPICE protocol has two options that can be enabled or disabled. These options handle sharing resources/signals between the client and the guest.

Table 5.1. SPICE Options

Option	Description
Enable `Ctrl+Alt+Delete` Sending	**`Ctrl`+`Alt`+`Delete`** is a special keystroke that can be intercepted locally or remotely. • Select this option to enable sending the keystroke to the remote desktop. • Clear this option to disable sending the keystroke to the remote desktop.
Enable USB Auto-Share	USB Auto-Sharing allows any USB device that is inserted into the client machine to be accessed by the virtual desktop. • Select this option to allow the USB to be automatically shared. The option will be overridden if the system administrator has defined a policy that prevents certain USB devices from being shared. • Clear this option to disable the USB from being automatically shared.

Procedure 5.2. To configure the SPICE options:

1. At the bottom of the desktop symbol, click **Options** and verify that the **SPICE** option is selected.
2. Click **Protocol Options**.
   The SPICE Options are displayed.

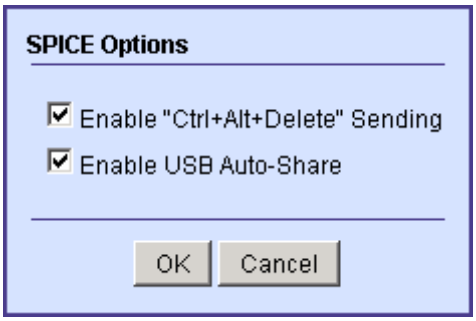

Figure 5.6. SPICE Options

3. Select the checkboxes corresponding to the required options, according to the information in Table 5.1, "SPICE Options". Use of these options are described in further detail in Chapter 6, *Using Virtual Desktops*.

5.1.2.1.2. RDP Options

A desktop connected with the RDP protocol has one option that can be configured.

Table 5.2. RDP Options

Option	Description
Use Local Drives	• Select this option to allow local CD or DVD drives to be available to the virtual desktop. • Clear this option to prevent local CD or DVD drives from being available to the virtual desktop.

Procedure 5.3. To configure the RDP option:

1. At the bottom of the desktop symbol, click **Options** and verify that the **RDP** option is selected.
2. Click **Protocol Options** to display the RDP Options.

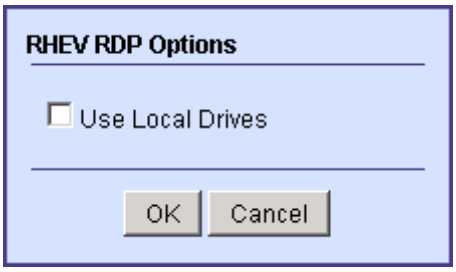

Figure 5.7. RDP Options

3. Select the checkbox to use local drives, according to the information provided in Table 5.2, "RDP Options".
4. Click **OK** to continue.

5.1.3. Connecting to a desktop

Once a desktop is turned on, it must be connected before it can be used.

Procedure 5.4. To connect a desktop:

1. From the desktop symbol, click **Connect/Disconnect**.
2. If another user is already connected to the desktop, a warning message is displayed.

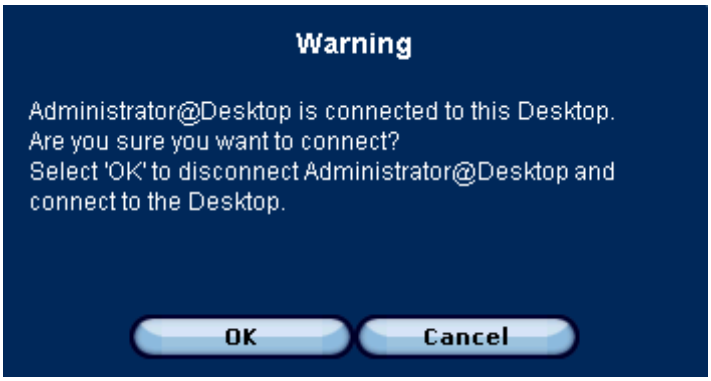

Figure 5.8. Disconnect warning

A. To abort the procedure, click **Cancel**.

B. To continue, causing the other user to be disconnected, click **OK**.

3. If it is the first time connecting with SPICE, you must install the appropriate SPICE component or plugin. If you are connecting from a Windows computer, install the ActiveX component as in Section 3.3, “ActiveX installation”. If you are connecting from a Red Hat Enterprise Linux computer, install the Mozilla Firefox plugin as in Section 3.4, “Mozilla Firefox plugin installation”.
4. Enter your login details in the **User Name** and **Password** fields and click **OK** to continue.

Multiple desktop connection

It is possible to be connected to multiple desktops simultaneously.

5.1.3.1. Configuring remote access on Windows guests using RDP

If you are using the RDP connection protocol to log in to a Windows desktop, you have to enable remote access on the desktop before connecting to it. To do so, you need access to the Red Hat Enterprise Virtualization administration portal. Contact your system administrator if you do not have the relevant permissions.

Procedure 5.5. To enable remote desktop connection on a Windows desktop

1. From the administration portal, use the **Console** button to log in to a Windows desktop via SPICE. Make sure you have administrative permissions for the virtual desktop.
2. Go to **Start** → **Control Panel** → **System and Security** → **System** → **Allow remote access**.
3. The **System Properties** dialog box displays. On the **Remote** tab, select **Allow connections from computers running any version of Remote Desktop**. Click **OK**.
4. You will now be able to access the Windows desktop using RDP from the user portal. Repeat this procedure for every Windows guest which uses RDP.

5.1.4. Logging out of a desktop

Once you have finished using a desktop, you must first log out according to the instructions specific to the operating system before logging out of the user portal.

- To log out from Windows, go to **Start** → **Log Off**
- To log out from Red Hat Enterprise Linux, go to **System** → **Log Out**

Confirm that the desktop is logged out before proceeding to sign out of the user portal, as described in Section 3.2, “Logging out”.

Chapter 6. Using Virtual Desktops

This chapter covers the use of virtual desktops. The options available for use with virtual desktops depend on the connection protocol and options used when connecting, as described in Section 5.1.2.1, “Configuring connection protocol options”.

6.1. Desktops connected using SPICE

When using the SPICE protocol to connect to a desktop, it is possible to configure a number of connection options. The available options are dependent on the operating system installed on the desktop.

Procedure 6.1. To display the available protocol options:

Windows Only

These instructions are only relevant to the Windows SPICE client. The Linux client allows for the use of hotkeys listed in Section 6.1.1, “SPICE options”, but does not have a connection menu as described below.

1. Once connected to the desktop, right-click on the desktop window title bar.
2. The connection menu is displayed.

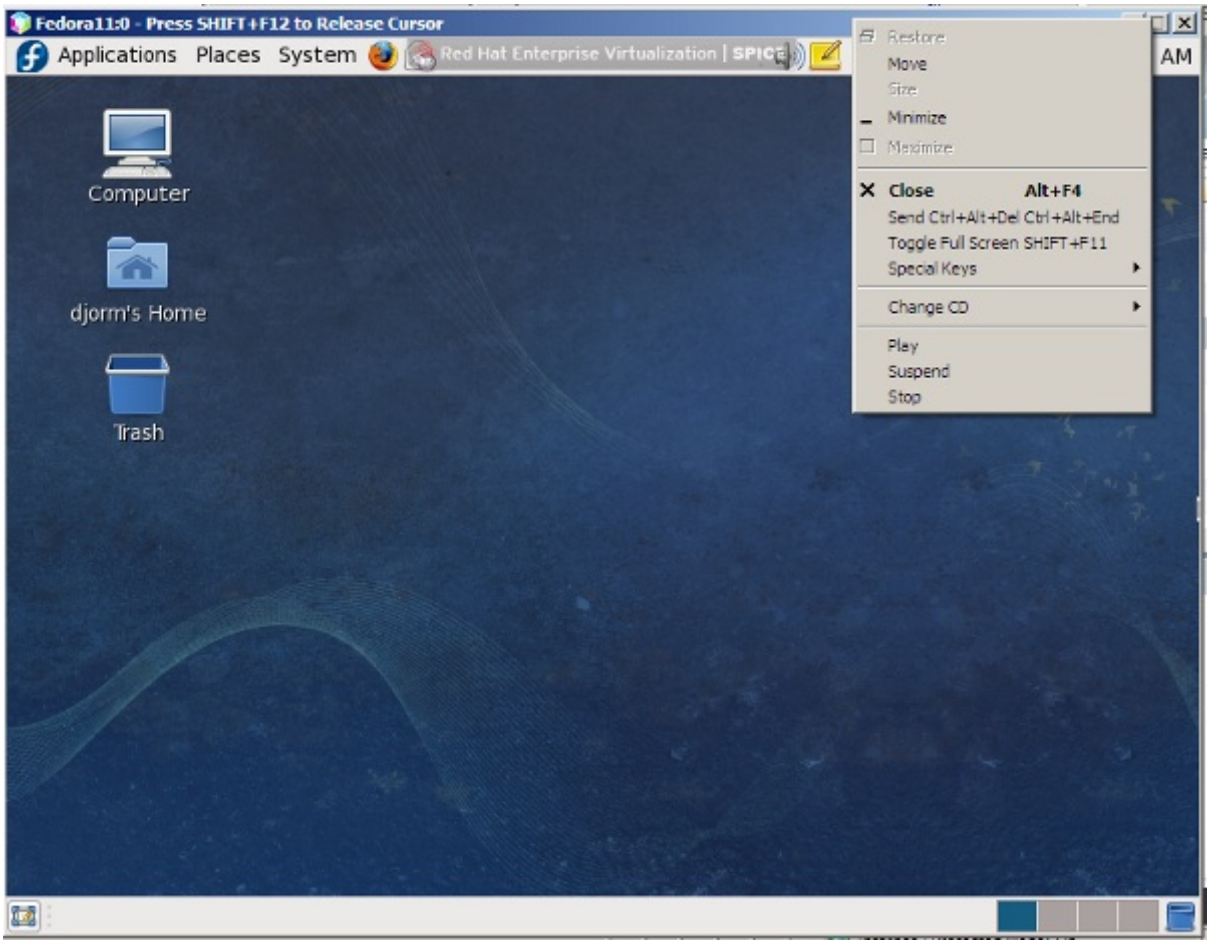

Figure 6.1. Connection menu

3. From the connection menu, you are able to select a range of options.

6.1.1. SPICE options

Table 6.1. Connection menu options

Option	Description	Hotkey
Send Ctrl+Alt+Del	Sends the Ctrl+Alt+Del key combination to the virtual desktop.	**Ctrl+Alt+End**
Toggle Full Screen	Toggles full screen mode on or off. When enabled, full screen mode expands the desktop to fill the entire screen. When disabled, the desktop is displayed as a window.	**SHIFT+F11**
Special Keys	Shows a menu of special key combinations which can be sent to the virtual desktop	-
SHIFT+F11	Sends the key combination **SHIFT+F11** to the virtual desktop	-
SHIFT+F12	Sends the key combination **SHIFT+F12** to the virtual desktop	-
Ctrl+Alt+End	Sends the key combination **Ctrl+Alt+End** to the virtual desktop	-

6.1.1.1. SPICE hotkeys

In addition to accessing the connection options through the connection menu, it is possible to use the hotkeys listed in Section 6.1.1, “SPICE options”, when using a desktop in full screen mode or from a Linux client. For Windows clients, the menu can be accessed by clicking on the desktop window title bar when not in full screen mode.

When the mouse is used inside a desktop, it becomes locked in the desktop window and cannot be used elsewhere. To unlock the mouse, press **Shift+F12**.

6.2. Desktops connected using RDP

A desktop connected with RDP has one configurable protocol option, which allows the use of local drives.

6.2.1. Using local drives

This protocol option allows a local CD or DVD drive on the client machine to be used on a virtual desktop connected with RDP.

Procedure 6.2. To enable use of local drives:

1. An the bottom of the desktop symbol, click **Options** and verify that the **RDP** option is selected.

2. Click **Protocol Options** to display the available options.
3. Select the **Use Local Drives** checkbox.

   The local CD/DVD drive can now be used with the desktop.

6.3. Using Multiple CD-ROMs on a virtual machine

To use the CD-ROM drive on a local client machine, go to the user portal and use **RDP** as the communication protocol. Then select **Use Local Drives** from the **Protocol Options**.

When you use multiple CD-ROMs, you can change the CD-ROM using the SPICE menu (right click on the title bar of the SPICE session). Alternatively, from the legacy GUI, use the VNC option in the **Run Once** command and use **Change CD-ROM** button in the VNC window.

6.4. Using USB devices on a virtual desktop

A virtual desktop that is connected with the SPICE protocol can be configured to connect USB devices. To do so, the USB device has to be plugged into the client machine, then enabled to appear on the guest machine. Red Hat Enterprise Virtualization presently supports USB redirection on the following clients and guests:

- Client
  - Red Hat Enterprise Linux 6.0
  - Red Hat Enterprise Linux 5.5 and higher
  - Windows XP
  - Windows 7
- Guest
  - Windows XP
  - Windows 7

Understanding the difference between client and guest

It is important to note the distinction between the client machine and guest machine. The client is the machine you use to access a guest. The guest is the virtual desktop which can be connected through the User Portal.

6.4.1. Enabling USB redirection

To configure USB policies, you need to be able to access the Red Hat Enterprise Virtualization Manager administration portal. If you do not have the permissions to do so, contact your system administrator.

Procedure 6.3. To enable USB redirection

1. On a Windows client machine, install the **RHEV-USB_Client.exe** package which can be downloaded from the Red Hat Network.
2. On the guest machine, install **RHEV-ToolsSetup.exe** on the guest machine.
   a. Download **RHEV-toolsSetup.iso** from the Red Hat Network onto the server where Red Hat Enterprise Virtualization Manager is installed.
   b. From the Red Hat Enterprise Virtualization Manager server run **Start → All Programs → Red Hat → RHEV Manager → ISO Uploader**.

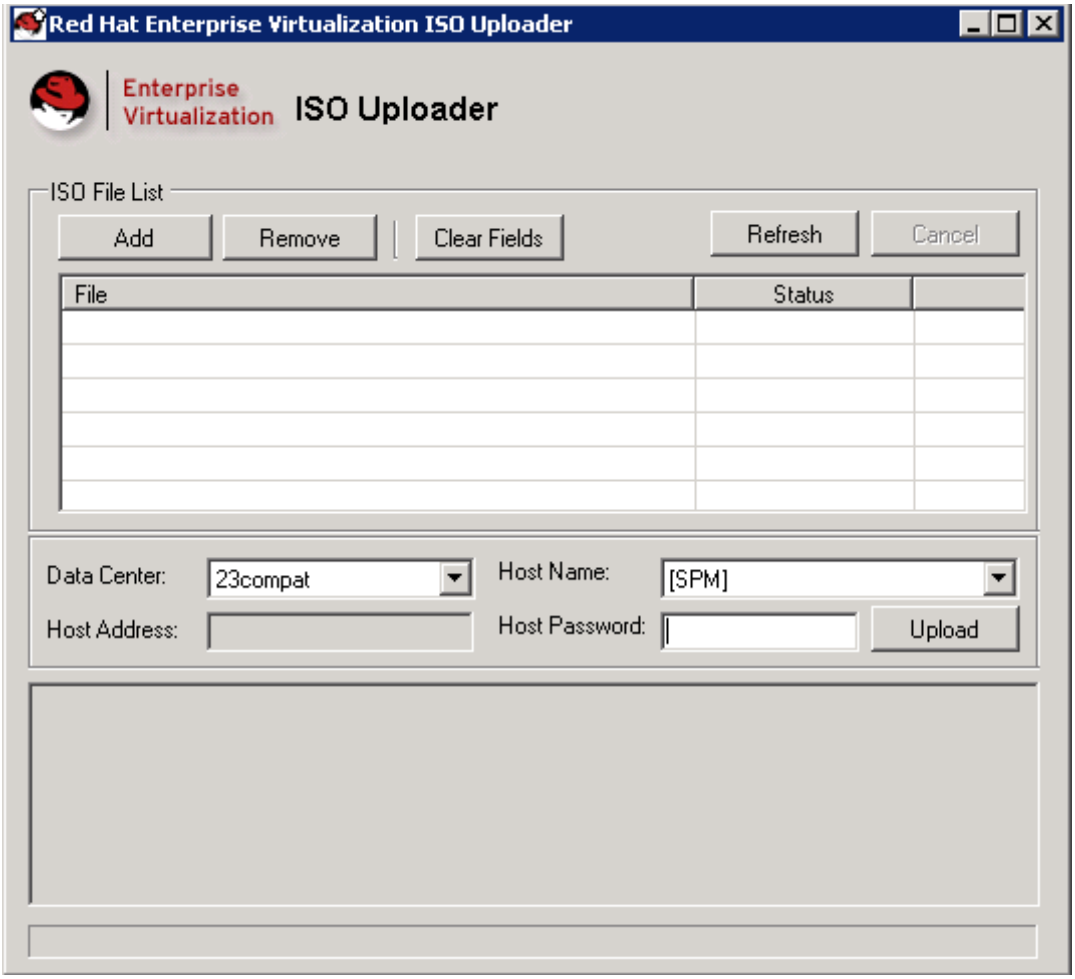

Figure 6.2. ISO Uploader menu

c. Click **Add** and select your ISO image. Make sure the Host Name and Host Address are configured correctly. If you have a Host Password, enter it in text field provided.

d. Click **Upload**. The ISO image will be attached to your storage domain.

e. Log in to the web administration portal. Select the virtual desktop you want to use your USB device on and right click on it. Click **Change CD** and select **RHEV-toolsSetup.iso**.

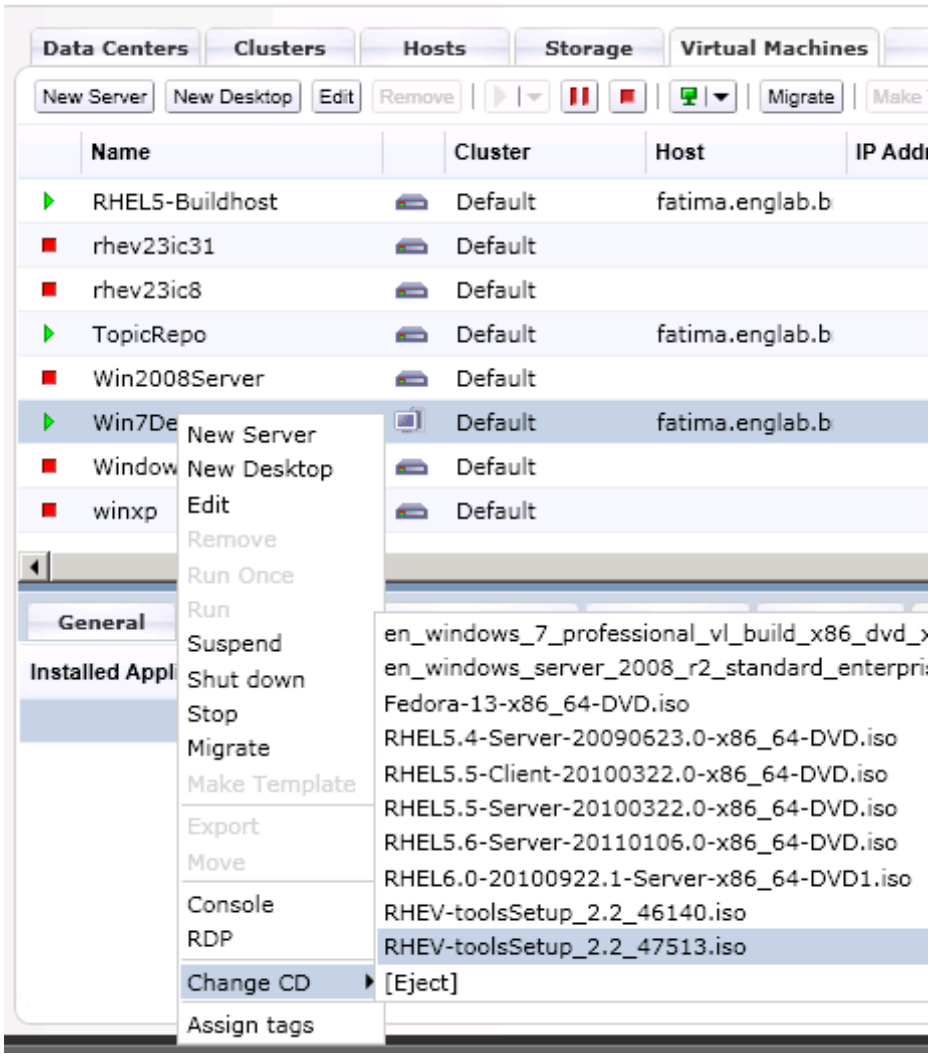

Figure 6.3. Uploading RHEV-toolsSetup onto a virtual desktop

f. Connect to your virtual desktop. The RHEV-Tools ISO can be accessed from the CD Drive. Enter the CD directory and launch **`RHEV-ToolsSetup.exe`** to install the required tools.

g. Restart your desktop for changes to take effect.

3. Allow connections on **TCP port 32023** on any firewalls between the virtual desktop and the client machine.
4. To enable your virtual desktop to accept USB devices, select the SPICE protocol option **Enable USB Auto-Share** from the User Portal. For further information refer to Section 5.1.2.1.1, “SPICE Options”.
5. Log in to your virtual desktop and attach a USB device to the client. If the required USB device does not appear directly on the virtual desktop, right click on the SPICE frame and select **USB Devices**. Choose your device from the list displayed.

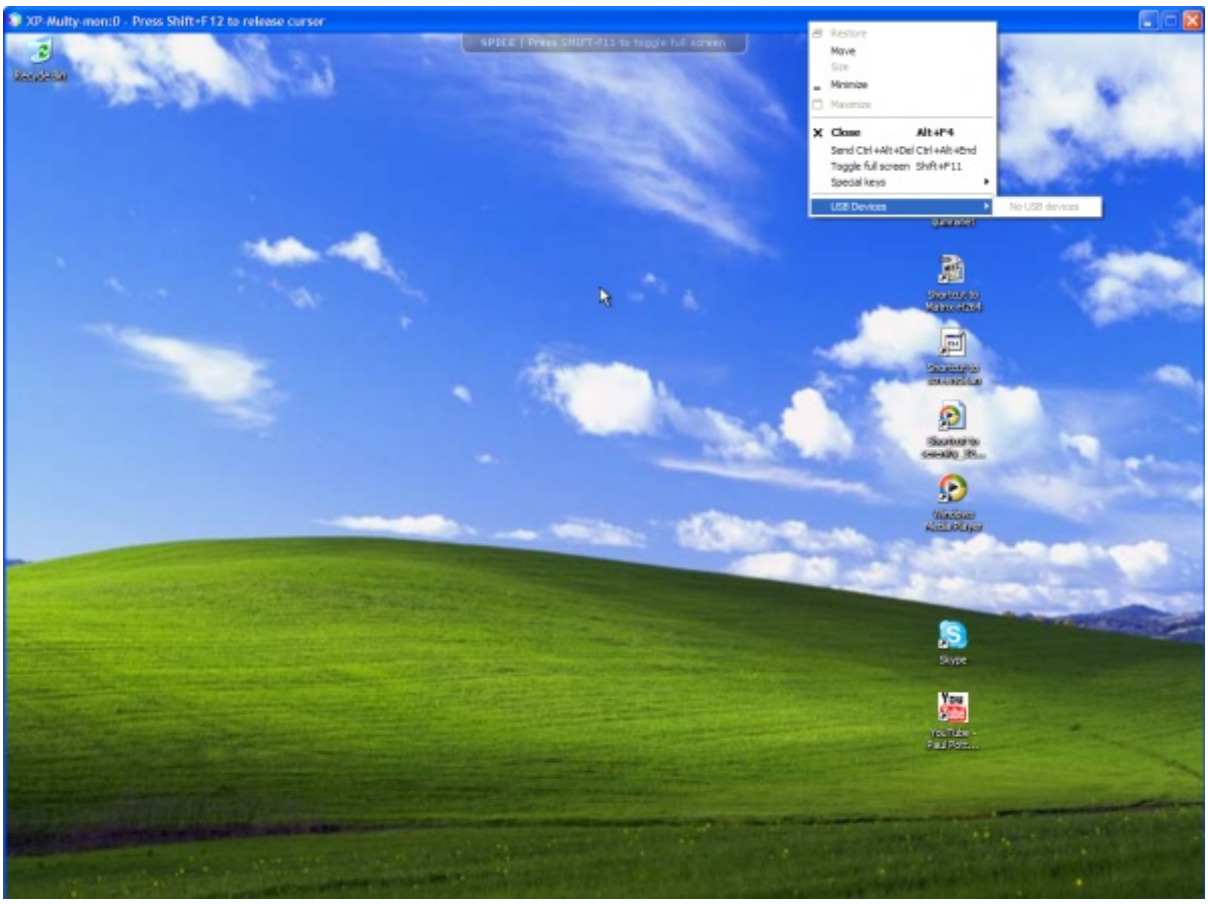

Figure 6.4. List of connected USB devices

USB redirection on Red Hat Enterprise Linux clients

Procedure 6.3, "To enable USB redirection" is only applicable to Windows clients. For Red Hat Enterprise Linux clients, USB devices are automatically shared between clients and guests, as long as the **Enable USB Auto-Share** option has been checked before connecting to the guest.

6.4.2. Configuring USB filter policy

If the USB device can be used when connecting from the Red Hat Enterprise Virtualization administration portal but not on the virtual machine, the USB Filter Policy has to be configured from the server on which the Red Hat Enterprise Virtualization manager is installed.

Procedure 6.4. To enable use of USB device on virtual desktop

1. Verify that the required device is a enabled under the USB Filter Policy. This can be done in two ways:
    a. Display the **USB Filter Editor** using **Start → RedHat → RHEVManager → USB Filter Editor**. This displays a sub-menu with a list of all USB devices available to the desktop.

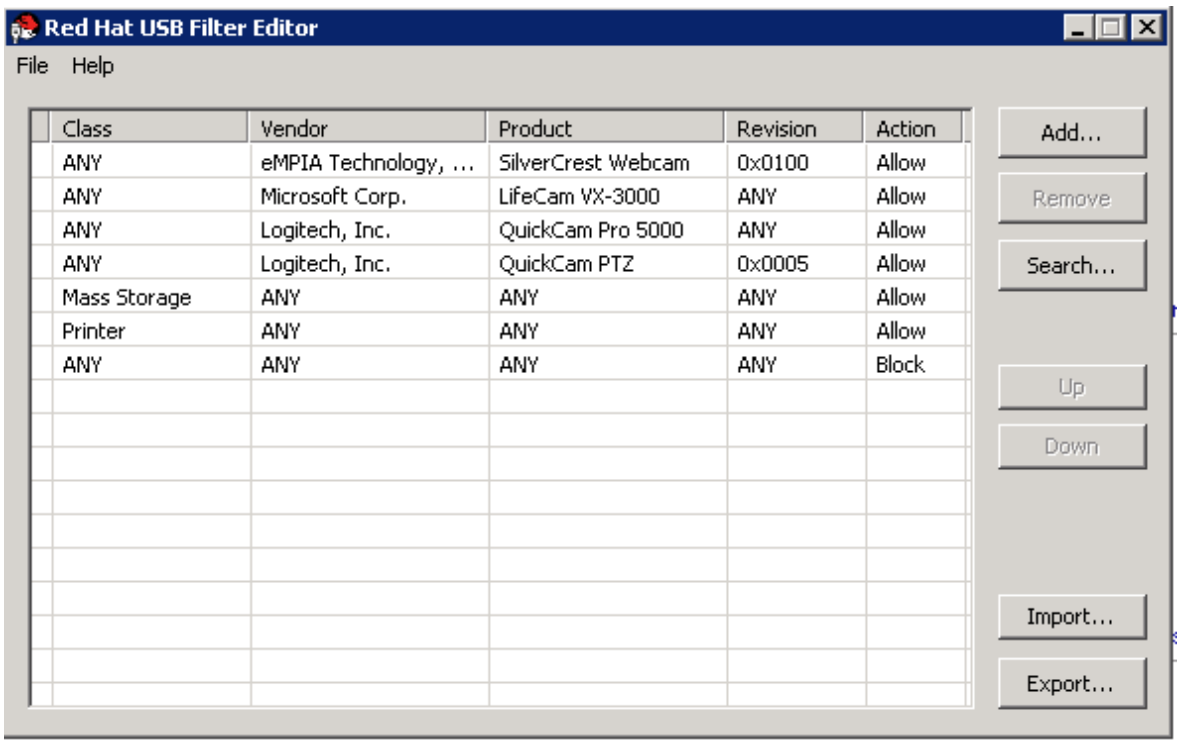

Figure 6.5. USB Filter Editor menu

On the last line, it looks like "ANY-ANY-ANY-ANY-Block". Right click on it and select **Edit**. Change the setting from **Block** to **Allow** and press OK.

b. On the USB Filter Editor, click **`Search`**. This will bring up a list of connected USB devices. Select the USB device required and click **`Allow`** to enable its usage.

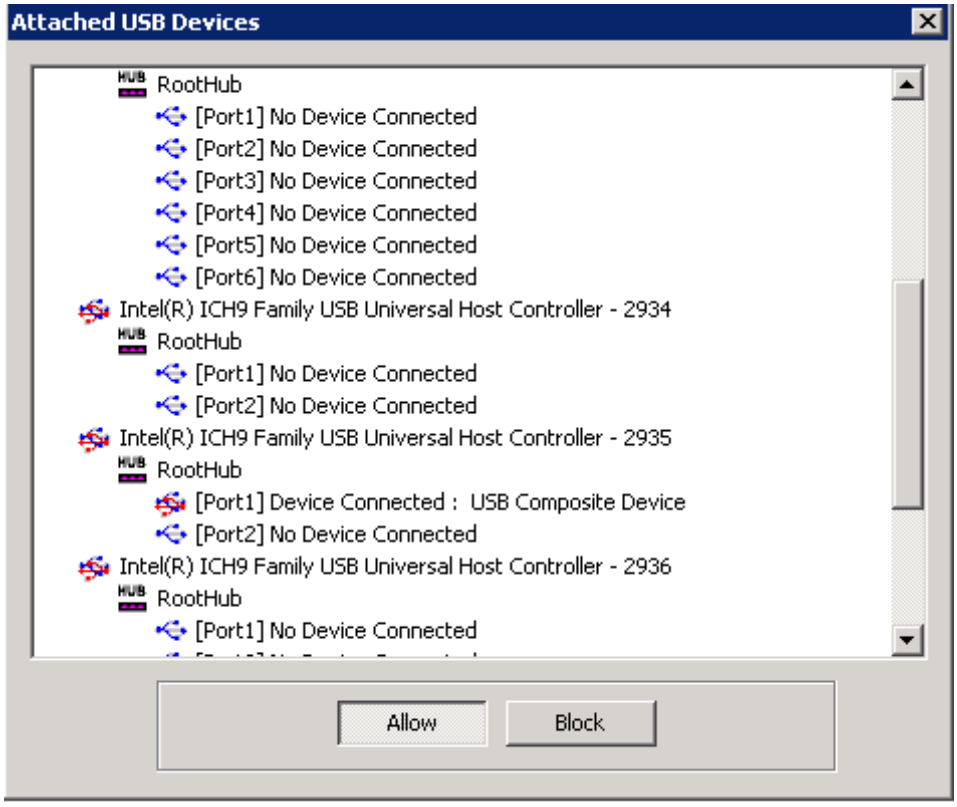
Attached USB Devices
RootHub
[Port1] No Device Connected
[Port2] No Device Connected
[Port3] No Device Connected
[Port4] No Device Connected
[Port5] No Device Connected
[Port6] No Device Connected
Intel(R) ICH9 Family USB Universal Host Controller - 2934
RootHub
[Port1] No Device Connected
[Port2] No Device Connected
Intel(R) ICH9 Family USB Universal Host Controller - 2935
RootHub
[Port1] Device Connected : USB Composite Device
[Port2] No Device Connected
Intel(R) ICH9 Family USB Universal Host Controller - 2936
RootHub
[Port1] No Device Connected
Allow
Block

Figure 6.6. Attached USB devices

Automatically redirected USB devices

The default USB Policy enables redirection of the following devices:

- Webcams
- All mass-storage devices
- All printers

2. You can **Add, Remove, Import** and **Export** devices that your virtual desktops have access to.

   The priority of each entry is set according to its location from the top. This can be changed using the **Up** and **Down** buttons.
3. Once you have customized your USB policy, save the changes using **Ctrl+S** or from the **File** menu.
4. Click **Export** to save the **usbfilter.txt** file onto
   - **C:\Program Files\Redhat\RHEVManager\UserPortal\Consoles\Spice**
   - **C:\Program Files\Redhat\RHEVManager\WebAdminPortal\Consoles\Spice**

   Open the file and verify that the last line looks like "-1,-1,-1,-1,1"
5. Restart the Internet Information Service (IIS) on the client using **Start > Run > iisreset**.

   The USB Device policy will now be implemented on virtual desktops running on the system.

Disabling USB Autoplay on Windows Clients

On Windows clients, some USB devices will autoplay when connected. If a USB device autoplays, the autoplay window will appear and the client will take control of the device, making it unavailable to the virtual desktop. To avoid this issue, disable USB autoplay on your Windows clients.

Further information on configuring USB policies can be found in the *Red Hat Enterprise Virtualization Administration Guide*.

Revision History

Revision 2-6.400	**2013-10-31**	**Rüdiger Landmann**
Rebuild with publican 4.0.0		
Revision 2-6	**2012-07-18**	**Anthony Towns**
Rebuild for Publican 3.0		
Revision 3-0	**Tuesday 15 March 2011**	**Cheryn Tan**
BZ #683678 - Change "Firefox" to "Mozilla Firefox" in line with word usage guide - fixed		
BZ #683679 - Can't connect to a desktop while it's powering up - fixed		
BZ #685002 - [Docs] user guide includes no info on usb redirector usage - fixed		
Revision 2-0	**Thu 1 July 2010**	**David Jorm**
Remove keyboard layout limitation BZ#609751		
Revision 1-0	**Thu 10 June 2010**	**David Jorm**
RHEV 2.2		
General Availability		